PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of Hartley Moyes	:	
	:	Art Unit: 3635
Serial No. 09/985,673	:	Examiner: Chi Q. Nguyen
Filed: November 5, 2001	:	Atty. Dkt: 6240.241
Title: METHOD OF MANUFACTURING A MOLDED DOOR SKIN FROM A FLAT WOOD COMPOSITE, DOOR SKIN PRODUCED THEREFROM, AND DOOR MANUFACTURED THEREWITH	:	

APPELLANT'S APPEAL BRIEF

Trademark Trial and Appeal Board
U.S. Patent and Trademark Office
Madison East, Concourse Level Room C 55
600 Dulany Street
Alexandria, VA 22314

Mail Stop Appeal Brief - Patents

Technology Center 3600

Dear Sir:

Appellant appeals from the Examiner's Final Rejection of all pending claims in the above-captioned application. Attached hereto is a Request for an Extension of Time for one (1) month along with the requisite fee.

Appellant respectfully requests that the Board of Patent Appeals and Interferences consider the following arguments and reverse the decision of the Examiner in whole. The Commissioner is hereby authorized to debit Account No. 50-0548 for the fee for the Extension of Time, and the fee for filing this brief in support of this appeal. Should any

additional fees be required, the Commissioner is hereby authorized to charge Account No. 50-0548.

REAL PARTY IN INTEREST:

The real parties in interest are Masonite Corporation and Masonite International Corporation, One North Dale Mabry Highway, Suite 950, Tampa, Florida, 33609.

RELATED APPEALS AND INTERFERENCES:

There are no appeals or interferences known to Appellant, Appellant's legal representative or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS:

Claims 18-20 and 23-39 have been finally rejected by the Examiner. Claims 1-17, 21, 22, 40 and 41 were canceled.

Appellant appeals the Examiner's Final Rejection of claims 18-20 and 23-39, which are set forth in Appendix A.

STATUS OF AMENDMENTS:

By response submitted via courier on March 12, 2007, Appellant added new claims 40 and 41. New claims 40 and 41 were then canceled by response submitted via courier on April 12, 2007. No other amendments have been filed subsequent to the Final Office Action of January 4, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER:

The present invention is directed to a hollow door having a door frame and first and second door skins attached to the door frame so as to define a hollow core area there between. At least one of the skins is a reformed molded wood composite door skin

having a plurality of panels molded therein, and at least one molded door skin has a bond strength of at least about 2.0 N/mm^2. *See Claim 18; Specification, page 6, lines 14-21; page 8, lines 22-28; page 9, lines 13-15.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, and wherein both the first and second door skins are molded door skins having a bond strength of at least about 2.5 N/mm^2. *See Claim 19; Specification, page 6, lines 14-21; page 9, lines 15-16.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, wherein each of the first and second door skins is a molded door skin formed by pressing a loose bat or mat into a wood composite flat door blank having a density of at least about 550 kg/m^3, and thereafter moisturizing, heating, and reforming in a press the flat door blank into a molded door skin having the panels molded therein, so that the bond strength of each of the skins is increased relative to that of the original flat blanks from which they are formed. *See Claim 20; Specification, page5, lines 25-28.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, and wherein the molded door skin has an exteriorly disposed side having a moisture impervious barrier thereon. *See Claim 23; Specification, page 6, lines 8-10; page 11, lines 2-7; page 18, lines 5-7.*

Also claimed is a hollow core door having all of the features of claims 18 and 23 noted above, and wherein the moisture impervious barrier is selected from the group consisting of melamine impregnated crepe paper, phenolic resin crepe paper, and cross-linked polymeric resin. *See Claim 24; Specification, page 11, lines 2-7; page 18, lines 8-21.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, and wherein the molded door skin has a substantially constant density. *See Claim 25; Specification, page 6, lines 1-4; page 22, lines 24-25; Figure 8.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, and wherein the molded door skin has an outer planar portion, an inner planar portion, and a contoured portion between and integral with the outer and inner planar portions. *See Claim 26; Specification, page 12, lines 16-19; Figure 2.*

Also claimed is a hollow core door having all of the features of claims 18 and 26 noted above, and wherein the outer planar portion lies on a plane that is coplanar with the plane of the inner planar portion. *See Claim 27; Figure 2.*

Also claimed is a hollow core door having all of the features of claims 18 and 26 noted above, and wherein the contoured portion includes an angled offset portion. *See Claim 28; Specification, page 12, lines 16-19; Figure 2.*

Also claimed is a hollow core door having all of the features of claims 18 and 26 noted above, and wherein the contoured portion has a thickness differing from the thickness of the outer and inner planar portions. *See Claim 29; Specification, page 12, lines 22-28.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, and wherein the molded door skin has an exteriorly disposed side having a pigmented sealer thereon. *See Claim 30; Specification, page 17, lines 9-14.*

Also claimed is a hollow core door having all of the features of claims 18 and 30 noted above, and wherein the pigmented sealer provides a uniform colored surface. *See Claim 31; Specification, page 17, lines 9-14.*

Also claimed is a hollow core door having all of the features of claim 18 noted above, and also including a foam filling the hollow core area. *See Claim 32; Specification, page 11, lines 16-18.*

Also claimed is a hollow core door having a door frame having opposite first and second sides, a first door skin attached to the first side of the door frame, and a second door skin attached to the second side of the door frame to establish a hollow core area between the first and second door skins. The first door skin is a first reformed molded wood composite having a plurality of panels and a bond strength of at least about 2.0 N/mm^2, and the second door skin is a second reformed molded wood composite having a plurality of panels and a bond strength of at least about 2.0 N/mm^2. *See Claim 33; Specification, page 6, lines 14-21; page 8, lines 22-28; page 9, lines 13-15.*

Also claimed is a hollow core door having all of the features of claim 33 noted above, and wherein the first and second reformed molded wood composites each have a density of from about 550 kg/m^3 to about 1200 kg/m^3. *See Claim 34; Specification, page5, lines 25-28.*

Also claimed is a hollow core door having all of the features of claim 33 noted above, and wherein the first and second reformed molded wood composites each have a density of from about 800 kg/m^3 to about 1200 kg/m^3. *See Claim 35; Specification, page 22, line 27 – page 23, line 2.*

Also claimed is a hollow core door having all of the features of claims 33 and 35 noted above, and wherein the first and second reformed molded wood composites each have a bond strength of at least 2.5 N/mm^2. *See Claim 36; Specification, page 6, lines 14-21; page 9, lines 15-16.*

Also claimed is a hollow core door having all of the features of claim 33 noted above, and also including first and second sealers applied to exterior surfaces of the first and second door skins, respectively. *See Claim 37; Specification, page 17, lines 9-14.*

Also claimed is a hollow core door having all of the features of claim 33 noted above, and also including first and second moisture impervious barriers applied to exterior surfaces of the first and second door skins, respectively. *See Claim 38; Specification, page 6, lines 8-10; page 11, lines 2-7; page 18, lines 5-7.*

Also claimed is a hollow core door having all of the features of claim 33 noted above, and also including a foam filling the hollow core area. *See Claim 39; Specification, page 11, lines 16-18.*

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:

Whether the Examiner has applied the proper legal analysis in concluding that claims 18-20, 25-29, 32-36 and 39 are unpatentable under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,766,774 to Lynch ("Lynch").

Whether the Examiner has applied the proper legal analysis in concluding that claims 23, 24, 30, 31, 37 and 38 are unpatentable under 35 U.S.C. §103(a) as obvious over Lynch in view of U.S. Patent No. 5,219,634 to Aufderhaar ("Aufderhaar").

Appellant submits that all of the claims on appeal are separately patentable. Claims 18-20 and 23-39 do not stand or fall together. Support for Appellant's assertion is provided in the arguments below.

ARGUMENT:

Obviousness is a conclusion of law based on underlying findings of fact. *In re Gartside*, 203 F.3d 1305, 1316, 53 USPQ2d 1769, 1778 (Fed. Cir. 2000). If the

underlying findings of fact are erroneous, the legal conclusion cannot stand. "In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citations omitted).

Appellant asserts that each claim on appeal is separately patentable. "It is to the claims which particularly point out what the inventor regards as his invention that one must look, and each claim must be considered separately. In one piece of apparatus disclosed as an embodiment of an invention, there may be several inventions; therefore, the claims are the place to look, and each claim must be considered separately." *Stiftung v. Renishaw PLC*, 20 USPQ2d 1094, 1101 (Fed. Cir. 1991). Each claim should be reviewed separately. *See In re Beaver*, 13 USPQ2d 1409, (Fed. Cir. 1989)(Applicant submitted concise arguments pointing out the essential elements as compared with prior claims, and the inapplicability of the cited references, which had previously been discussed in the brief. It was therefore not only unfair to the applicant, but also inefficient to decline to review claims that were properly appealed and reasonably argued before the Board).

Arguments of patentability for each claim are provided separately:

Claim 18

Claim 18 is directed to a hollow door having a door frame and first and second door skins attached to the door frame so as to define a hollow core area there between. At least one of the skins is a reformed molded wood composite door skin having a

plurality of panels molded therein, and at least one molded door skin has a bond strength of at least about 2.0 N/mm^2.

As acknowledged by the Examiner, Lynch neither discloses nor suggests a door skin having a bond strength of at least about 2.0 N/mm^2. Specifically, the Examiner stated that the prior art of record "does not teach the specific range of bonding strength". See 1/4/2007 Final Office Action, p. 2. Instead, the Examiner asserted that "the applicant's disclosure fails to show the criticality for specifically claimed bonded strength; therefore it would have been obvious of a design choice to use the bonded strength range such specified in the claims." In addition, the Examiner argued that "the claims are drawn to an article; therefore, only structural limitations are considered for patentable weight." See 1/4/2007 Final Office Action, pgs. 2-3.

Following issuance of the Final Office Action, the Appellant conducted a personal interview on March 8, 2007. During the interview, Examiner Nguyen consulted with his primary, Examiner Rob Canfield. Following consultation with Examiner Canfield, Examiner Nguyen agreed that the claimed bond strength was not an obvious design choice. See 3/8/2007 Interview Summary. Appellant thereafter filed a response on March 12, 2007.

Notwithstanding the agreement and consultation with Primary Examiner Canfield, Examiner Nguyen subsequently issued another Office Communication, stating: "During a personal interview on 3/8/2007, the examiner agreed that the argued limitation "the molded door has a bond strength of at least about 2.0 N/mm^2 was not an obvious design choice; however, upon further consideration with examiner's supervisor, this limitation

does not contain any structural limitation therefore the previous rejection is maintained." See 5/11/2007 Office Communication.

Thus, the Examiner essentially argues: 1) the claimed bond strength is an obvious design choice, because 2) the applicant fails to show the criticality for the claimed bond strength; and 3) the bond strength is not a structural limitation. The Examiner's arguments and conclusions are legally improper, and should be reversed.[1]

*A. **The Examiner has failed to make out a prima facie case of obviousness.***

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1391 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls."). The analysis supporting obviousness, however, should be made explicit. *KSR,* 127 S. Ct. at 1731, 82 USPQ2d at 1389. The KSR Court noted that "[t]o facilitate review, this analysis should be made explicit." *Id.*, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

The Examiner failed to make such an explicit analysis. Instead, the Examiner asserts obviousness based on conclusory statements of Appellant's alleged failure to show criticality for the specifically claimed bond strength. The Examiner provides no basis for the assertion that one having ordinary skill in the art would obviously make "a

[1] It is not clear from the Official Communication whether the Examiner only relies on the structural limitation argument. However, each assertion in the Final Office Action will be addressed given the Examiner indicates that the previous rejection is maintained.

stronger bonding (greater than 1.4 N/mm^2) by providing a stronger bonding material to achieve a desirable result, 2.0-2.5 N/mm^2), etc." See 1/4/2007 Final Office Action, p. 2. The Examiner points to no interrelated teachings of multiple patents or the background knowledge possessed by a person having ordinary skill in the art as support for such a conclusion. *See KSR*, 127 S.Ct at 1740-41, 82 USPQ2d at 1396; *see also In re Kahn*, 441 F.3d at 988, 78 USPQ2d at 1336 ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"). As such, the Examiner has failed to set forth a *prima facie* case of obviousness.

The bond strength limitation cannot be dismissed as merely being a matter of "obvious design choice" based solely on the examiner's bald assertion that such is the case. To the contrary, in a proper obviousness determination, the examiner is required to consider the totality of the record, including all evidence and arguments presented by Appellant, and to evaluate even minor changes in terms of the invention as a whole and in the context of whether the prior art provides any teaching to one of ordinary skill in the art to have made the changes that would produce appellants' claimed invention. *See, e.g., In re Chu*, 66 F.3d 292, 298-99, 36 USPQ2d 1089, 1094-95 (Fed. Cir. 1995) and *In re Gal*, 980 F.2d 717, 719, 25 USPQ2d 1076, 1078 (Fed. Cir. 1992).

A design choice, even a simple design choice, is not obvious if the claimed structure and the function it performs are different from the prior art. See *In re Gal*, 980 F.2d 717, 25 U.S.P.Q.2D (BNA) 1076 (Fed. Cir. 1992) (finding of "obvious design choice" precluded where the claimed structure and the function it performs are different

from the prior art). Appellant respectfully submits that the claimed bond strength is neither disclosed nor suggested by the prior art. Lynch is completely and utterly silent as to the bond strength of its door skin. Nowhere does Lynch state or intimate that the bond strength of the door skins is a concern or inadequate. It should be noted that Lynch and the present application are commonly owned. The assignee is therefore quite familiar withy Lynch and how is differs from the present invention. Nor has the Examiner pointed to a secondary reference which states or intimates the importance of increasing bond strength to that claimed by Appellant.

The Examiner states, "the applicant's disclosure ... expressly stated that 'preferably a bond strength of at least about 2.5 N/mm2' would made [sic] a better bonding strength than the prior art." See 1/4/2007 Final Office Action, p. 2. It is not entirely clear what argument the Examiner is attempting to make in referencing disclosure directed to a preferred embodiment. To the extent the Examiner is relying on Appellants' own disclosure seeking to shift the burden to the Appellants to show criticality of the claimed bond strength, it is not proper to rely upon Appellants' own disclosure of their invention in the specification in this context. A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made *to a person having ordinary skill in the pertinent art.* 35 U.S.C. § 103(a) (emphasis added). Before the burden can be shifted, the Examiner must establish obviousness based on teachings and knowledge *within the prior art.* The Examiner has not done this.

Moreover, it is relevant to note that Lynch focuses on molded core components, and discusses door skins only in regards to the relationship of door skins to molded core

components. The Lynch patent is owned by the same assignee of the present application. As such, Appellant is fully familiar with this reference and the scope of its disclosure. The molded depressions disclosed in Lynch permit stacking or nesting of multiple skins. This reference is neither directed to nor discloses a door skin having the claimed bond strength of the present invention. At most, it could be assumed that the door skins referred to in Lynch are conventional door skins having a bond strength of about 1.4 N/mm^2.

B. Even if the Examiner had made a prima facie case of obviousness based on the criticality argument, Appellant presented evidence sufficient to rebut any such obviousness rejection.

Even if the Examiner had made a *prima facie* case of obviousness based on the criticality argument, which he has not, Appellant rebutted that case by demonstrating unexpected results and advantages compared to the prior art. Appellant directed the Examiner to the specification, which expressly indicates that the claimed bond strength, a result of the process patented in the parent application[2], is unexpected and advantageous compared to that of the prior art. The claimed bond strength would not have been expected by one of ordinary skill in the art.

Specifically, the specification discusses unexpected advantages for the claimed subject matter, and compares the claimed subject matter to conventional door skins:

[2] The present application is a continuation of parent application Serial No. 09/229,897, now U.S. Patent No. 6,312,540. The '540 patent includes claims directed to the disclosed method, which were pursued following a restriction requirement. Thus, the process for forming a door skin having the claimed bond strength is itself unexpected and patented. The Examiner has not indicated how one of ordinary skill in the art would have modified the Lynch patent to form a door skin having the claimed bond strength, absent practicing the patented invention of the parent application.

Thus, molded doors 1 may be made more efficiently and cost effectively, and the resulting door skins may have a strength of more than twice that of standard molded skins, and more than twice that of standard flush or flat skin blanks. Standard molded skins from Masonite Corporation, for example, typically have a bond strength of about 1.4 N/mm^2, while reformed skins 7, 9 according to certain embodiments of this invention preferably have a bond strength of at least about 2.0 N/mm^2, and most preferably a bond strength of at least about 2.5 N/mm^2.

See Specification, p. 9, lines 6-16 (emphasis added). Indeed, it is one of the very objects of disclosed invention to provide a molded door skin that is stronger than a conventional skin:

It is also an object of this invention to provide a door skin, that after reforming into a molded skin, is stronger than a standard flush or flat skin blank and a molded skin. In certain embodiments, the reformed molded skin has a bond strength of at least about 2.0 N/mm^2, and preferably a bond strength of at least about 2.5 N/mm^2. This can and is often double the internal bond after processing.

See Specification, page 6, lines 14-21. The increase in bond strength to the claimed levels is attained by a process which repairs "the stretched or broken bonds, created when deforming the boards ... and eventually reforms bonds stronger than were originally evident", as further explained in the specification:

Surprisingly, it has also been found that adding conditioning resins (e.g. melamine or urea formaldehyde thermal curing resins) to solid blank

10 prior to pressing, results in a stronger end product skin 7, 9 and a more aesthetically pleasing reformed skin 7, 9. It has been found that the addition of these resins allows the stretched or broken internal bonds, created when deforming the boards actually repairs these fibers and eventually reforms bonds stronger than were originally evident. The quantity of these resins can be varied to suit the final performance of the product requirements in terms of moisture resistance and internal bond strength.

See Specification, p. 10, lines 5-16 (emphasis added); see also p. 22, lines 13-15 (discussing the breakage of internal resin bonds during pressing of molded parts).

In addition to the specification disclosure, Appellant explained to the Examiner during prosecution the importance of the claimed bond strength compared to that of conventional skins. For example, see 2/10/2004 Response, pgs. 6-7 ("[T]he door skins according to the present invention have a substantially higher bond strength, and may have a bond strength of more than twice that of a standard flush or flat skin. ... [T]he claimed bond strength is not typical of molded door skins."); 2/18/2005 Response to Final, p. 4 (noting that door skins according to present invention have a bond strength of more than twice that of conventional door skins)[3]; 4/24/2006 Response, p. 7 ("In addition to the advantages of the increased bond strength (i.e. a stronger panel), providing reformed door skins avoids prior door skin molding procedures").

[3] It should be noted that at the time the February 18, 2005 Response was filed, the Examiner had finally rejected the claims based on a combination of references, but did not assert his criticality argument.

Appellant also explained to the Examiner the meaning of the term "bond strength" as that term is used in the claims and specification (and as understood by those skilled in the art as evidenced by the specification disclosure):

> The Examiner has alleged that the requisite motivation for providing the claimed bond strength for the door skin is to prevent "the skins from separating from the frame." The bond strength recited in the claims does not refer to bond strength between door skin and door frame, but to the intrinsic property of the skin itself. The Examiner's attention is directed to page 10, lines 4-15 and page 22, lines 13-15 of the specification, which discuss the breakage of internal resin bonds during pressing of molded parts. Applicant's specification details process steps for reforming the bonds stronger than were originally evident. Hence, the motivation alleged by the Examiner of improving skin-to-frame bond strength would not have suggested the claimed limitation.

10/11/2006 Response, p. 9 (emphasis added).

Appellant also argued:

> Applicant respectfully submits that the Examiner has not demonstrated what, if any, theoretical bonding material would have achieved the claimed bonding strength and worked for its intended purpose in a door skin. Applicant further respectfully submits that the Examiner does not point to any proof in the art which verifies that bond strength can be increased to the claimed levels simply by substituting a different bonding agent into a conventional process. Essentially, the Examiner points to a

desired result, but not to any means in the prior art for attaining the result. As explained above, Applicant achieves the claimed bond strength by practicing a series of process steps to a solid wood composite door blank which has previously been subject to a compression stage. These process steps are not suggested by the applied art.

Id. at pgs. 9-10. In response, the Examiner issued the Final Office Action which is the subject of this appeal, simply regurgitating the criticality arguments.

"An applicant may overcome a *prima facie* case of obviousness by establishing that the claimed range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003), citing *In re Geisler*, 116 F.3d at 1469-70, 43 USPQ2d at 1365; *In re Woodruff*, 919 F.2d at 1578, 16 USPQ2d at 1936). Evidence and arguments directed to advantages not disclosed in the specification cannot be disregarded. *In re Chu*, 66 F.3d 292, 299, 36 USPQ2d 1089, 1095 (Fed. Cir. 1995) ("We have found no cases supporting the position that a patent applicant's evidence or arguments traversing a § 103 rejection must be contained within the specification. There is no logical support for such a proposition as well, given that obviousness is determined by the totality of the record including, in some instances most significantly, the evidence and arguments proffered during the give-and-take of *ex parte* patent prosecution."). The specification need not disclose proportions or values as critical for applicants to present evidence showing the proportions or values to be critical. *In re Saunders*, 444 F.2d 599, 607, 170 USPQ 213, 220 (CCPA 1971).

The Examiner either failed to properly consider or failed to appreciate not only the specification disclosure, but also arguments submitted by Appellant. Of course, the Board need not even look to arguments proffered during prosecution because the specification of the present application does disclose advantages and discussion of the claimed bond strength relative to that of conventional door skins. *See Specification citations noted above.*

Accordingly, even if the Examiner had made a *prima facie* case of obviousness, Appellant directed the Examiner to explicit specification disclosure and presented arguments establishing the factual basis for the unexpected results and advantages for the claimed invention sufficient to rebut the Examiner's assertions. S*ee In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972).

When challenged as to the basis of the criticality and obvious design choice argument during the interview on March 8, 2007, the Examiner acknowledged that the claimed bond strength was not an obvious design choice. However, the Examiner maintained the rejection asserting that the bond strength limitation is not a structural limitation. (It is unclear whether, for purposes of this appeal, the Examiner maintains the criticality and obviousness rejections. See comment at footnote 1 above).

C. Contrary to the Examiner's assertion, bond strength is a proper structural limitation.

The Examiner incorrectly asserts that the claimed bond strength does not relate to a structural limitation. The Examiner's conclusion appears to be at least partially based on a misunderstanding of the term "bond strength", as that term is used in the specification. Contrary to the Examiner's assertions, the claimed bond strength does not

refer to the strength of the attachment between the door skin and door frame.[4] Rather, the bond strength refers to the internal resin bonds of the skin itself, as explained during prosecution and as clearly set forth in the specification. See 10/11/2006 Response; Specification, p. 10, lines 5-16. Just as density, caliper, and fiber size of a composite material are structural features, so too is the internal bond strength of the material.

The claimed bond strength is not typical of conventional molded door skins. See 2/10/2004 Response, p. 7. The specification details process steps for reforming the bonds stronger than were originally evident, and the resulting door skin with the increased bond strength. Hence, the Examiner's statements relating to improving skin-to-frame attachment are neither relevant nor suggest this claim limitation.

The prior art does not disclose or suggest the claimed bond strength, as acknowledged by the Examiner. Moreover, the prior art does not definitively teach how to go about increasing the bond strength of the door skins to the claimed levels. The Examiner states that "one having an ordinary skill in the art would obviously made a stronger bonding ... by providing a stronger bonding material to achieve a desired result". See 1/4/2007 Final Office Action, p. 2. Appellant respectfully submits that the Examiner has not demonstrated what, if any, theoretical bonding material would have achieved the claimed bonding strength and worked for its intended purpose in a door skin. Appellant further respectfully submits that the Examiner does not point to any proof in the art which verifies that bond strength can be increased to the claimed levels simply by substituting a different bonding agent into a conventional process. Nor has the

[4] The Examiner repeatedly alleged that it would have been "an obvious engineering design choice to provide appropriate bond strength" to "prevent the skins from separating from the frame", which indicates a misunderstanding of the term 'bond strength'. The term is clearly explained in the specification, and also well known to those of skill in the art.

Examiner articulated a reason why a higher bond strength would be desirable. Essentially, the Examiner points to a desired result, but not to any means in the prior art for attaining the result.

Although not addressed by the Examiner, note that Lynch also fails to disclose or suggest a reformed molded wood composite door skin, as claimed by Appellant. Rather, Lynch discloses the use of conventional molded door skins, which are formed from a slurry or mat of cellulosic material and resin binder. See '774 patent, col. 1, lines 33-35; col. 5, lines 66-67. By contrast, the present invention seeks to avoid molding procedures resulting in such conventional molded skins. See Specification, p. 9, lines 3-6.

Claim 19

Claim 19 depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 19 provides that each of the first and second door skins are molded door skins having a bond strength of at least about 2.5 N/mm^2. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, with the following additional arguments.

The Examiner states, "the applicant's disclosure ... expressly stated that 'preferably a bond strength of at least about 2.5 N/mm2' would made a better bonding strength than the prior art." See 1/4/2007 Final Office Action, p. 2. It is not entirely clear what argument the Examiner is attempting to make.

To the extent the Examiner is relying on Appellants' own disclosure seeking to shift the burden to the Appellants to show criticality of the bond strength, such an argument is not proper as noted above. Before the burden can be shifted, the Examiner must establish obviousness based on teachings and knowledge *within the prior art*. The

Examiner has not done this. To the extent the Examiner is asserting that Appellant is limited to claiming only one preferred embodiment, such an argument is also without merit. A claim may cover more than one embodiment. Moreover, the claims are not limited to only one of several embodiments disclosed in a specification. Thus, it is not entirely clear what, if any, assertion the Examiner is making in referencing disclosure directed to a preferred embodiment.

In any event, Lynch fails to disclose or suggest the claimed bond strength, as acknowledged by the Examiner. Moreover, there is no logical support for the Examiner's criticality argument in light of the specification disclosure and arguments proffered during prosecution. The Examiner has failed to establish a *prima facie* case of obviousness of claim 18, from which claim 19 depends. As such, Appellant submits that, for the same reasons, a *prima facie* case of obviousness has likewise not been established with respect to claim 19.

Claim 20

Claim 20 also depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 20 provides that each of the first and second door skins is a molded door skin formed by pressing a loose bat or mat into a wood composite flat door blank having a density of at least about 550 kg/m^3, which is thereafter moisturized, heated, and reformed in a press so that the resulting molded door skin has panels molded therein, and so that the bond strength of each of the skins is increased relative to that of the original flat blanks from which they are formed. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, with the following additional arguments.

The Examiner acknowledges that Lynch does not teach the claimed density limitations. Instead, the Examiner again relies on a criticality argument, asserting that "Applicant fails to show criticality for specifically claimed skin density; therefore it would have been an obvious design choice to use the skin density" specified in the claim. However, the claimed skin density is specifically discussed in the specification at page 14, lines 1-2.

The Examiner also asserts that the limitations of claim 20 are considered "a method of forming door skins ... not germane to the issue of patentabilty of the door skins". Claim 20 further defines the structural limitation of bond strength recited in claim 18 in that the bond strength of the reformed molded door skin is greater than that of the original flat blanks (i.e. blanks having a density of at least about 550 kg/m^3). Therefore, Appellant asserts that the invention of claim 20 has not been properly examined.

Claim 23

Claim 23 depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 23 provides for a moisture imperious barrier on an exteriorly disposed side of the molded door skin. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, with the following additional arguments.

In addition to acknowledging that Lynch does not disclose the claimed bond strength of claim 18, the Examiner also acknowledged that Lynch fails to disclose a moisture impervious barrier but asserts that the invention of claim 23 would have been obvious over Lynch in view of Aufderhaar. The excerpt from Aufderhaar upon which the Examiner relies states:

> U.S. Pat. No. 4,146,662 (Eggers et al.) discloses a warp and weather resistant solid core wood door having an overlaid laminate of phenolic resin-impregnated paper and veneer bonded in a heated press to the front and rear surfaces of a core material such as particle board.

See '634 patent, col. 1, lines 19-23. While the laminate in Eggers et al. may be generally considered a moisture impervious barrier, the barrier of Eggers et al. is not disposed on an exterior surface of a reformed molded wood composite door skin. Nor is the barrier disclosed in Eggers et al. provided on a door skin having a bond strength of at least about 2.0 N/mm^2, as required by claim 23. Thus, neither Lynch, Aufderhaar, nor Eggers et al. (mentioned generally in the background section of the Aufderhaar patent) disclose or suggest the invention claimed by Appellant.

Claim 24

Claim 24 depends from claim 23 and therefore includes all of the features of claims 18 and 23. In addition, the invention of claim 24 provides that the moisture impervious barrier is selected from the group consisting of melamine impregnated crepe paper, phenolic resin crepe paper, and cross-linked polymeric resin. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

As noted above, neither Lynch, Aufderhaar, nor Eggers et al. disclose or suggest the invention claimed by Appellant, including not only the limitations of claim 24 but also those limitations specified in claim 18.

Claim 25

Claim 25 depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 25 provides that the molded door skin has a substantially constant density. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, with the following additional arguments.

As with the rejection of claim 20, the Examiner acknowledges that Lynch does not teach a molded door skin having a substantially constant density. See 1/4/2007 Final Office Action, p. 4. However, the Examiner again relies on a criticality argument, asserting that "Applicant fails to show criticality for specifically claimed skin density; therefore it would have been an obvious design choice to use the skin density" specified in the claim. *Id.*

The claimed skin density of the blank from which the reformed door skin is formed is discussed in the specification at page 14, lines 1-2, as noted above. Claim 25, however, is directed to the density of the resulting reformed door skin. As explained in the specification, the substantially constant density of the resulting skin is a result of the unique reforming process:

> Figure 8 illustrates that reformed skin 7, 9 has a substantially constant density throughout its thickness. This a byproduct of the unique method of manufacture described above. The density of skin 7, 9 throughout substantially its entire thickness is preferably from about 800 to 1,200 kg/m3, but higher than the density of original flush blank 10 by around 10%.

See Specification, p. 22, line 24 – p. 23, line 2. Advantageously, the "reformed skins 7 and 9 attain a significantly higher hardness than is currently available with other molded skins." See Specification, p. 14, lines 15-17.

The Examiner's criticality argument fails to properly take into account the totality of the record, including the explicit specification disclosure, as well as arguments submitted during prosecution. Accordingly, a *prima facie* case of obviousness has not been made.

Claim 26

Claim 26 depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 26 provides that the molded door skin has an outer planar portion, an inner planar portion, and a contoured portion between and integral with said outer and inner planar portions. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, with the following additional arguments.

The Examiner asserts that Lynch discloses the basic structural elements of the claimed invention, including an outer planar portion, an inner planar portion, and a contoured portion. However, Lynch does not include the structural element of the claimed bond strength. As explained in the specification, "hollow core door 1 appears to be of the standard molded type, but in reality is not." Specification, p. 10, lines 17-18. However, "reformed skins 7 and 9 attain a significantly higher hardness than is currently available with other molded skins", structurally defined in claims 26 and 18 by the claimed bond strength. See Specification, p. 14, lines 15-17.

Claim 27

Claim 27 depends from claim 26 and therefore includes all of the features of claims 18 and 26. In addition, the invention of claim 27 provides that the outer planar portion lies on a plane that is coplanar with the plane of said inner planar portion. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

While Lynch may disclose generally a door skin having outer and inner planar portions and a contoured portion, it fails to disclose or suggest a door skin having these features in combination with the features required by claims 26 and 18 from which claim 27 depends.

Claim 28

Claim 28 depends from claim 26 and therefore includes all of the features of claims 18 and 26. In addition, the invention of claim 28 provides that the contoured portion includes an angled offset portion. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

Lynch fails to disclose or suggest a door skin having all of the features required by claim 28, in addition to those provided in claims 26 and 18 from which claim 28 depends. Accordingly, Appellant submits that a *prima facie* case of obviousness has not been made.

Claim 29

Claim 29 depends from claim 26 and therefore includes all of the features of claims 18 and 26. In addition, the invention of claim 29 provides that the contoured portion has a thickness differing from the thickness of the outer and inner planar portions.

Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

Contrary to the Examiner's assertions, Lynch does not disclose a door skin having a contoured portion with a thickness differing from the thickness of inner and outer planar areas. Lynch is silent as to any thickness variations of the door skin. As noted above, Lynch focuses on molded core components and only discusses door skins in regards to the relationship of door skins to molded core components.

As such, the Examiner's assertions are unsupported by the prior art. A *prima facie* case of obviousness has not been made.

Claim 30

Claim 30 depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 30 provides that the door skin has an exteriorly disposed side having a pigmented sealer thereon. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, and provides the following additional comments.

The advantages of the pigmented sealer are discussed in the specification:

> Pigmented sealer ... creates a uniform colored surface on the reformed skin. Preferably, the pigmented sealer is applied to what is to be the exterior surface of the skin. The pigmented sealer thus causes the resulting skin to be primed. Doors formed from prior molded skins need to be primed, thus adding cost."

See Specification, p. 17, lines 9-16.

The Examiner relies generally on Aufderhaar, in combination with Lynch and the criticality argument, in rejecting claim 30. However, no specific citation to Aufderhaar is made in support of the rejection. Nor does Aufderhaar suggest or teach the use of a pigmented sealer. Accordingly, Appellant submits that a *prima facie* case of obviousness has not been made.

Claim 31

Claim 31 depends from claim 30 and therefore includes all of the features of claims 18 and 30. In addition, the invention of claim 31 provides that the pigmented sealer provides a uniform colored surface. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

It should also be noted that the disclosure of Aufderhaar suggests that the surface of the resulting panel does not have a uniform colored surface. Specifically, Aufderhaar suggests using a urethane coating having a high solids content in order to properly coat the resulting panel. "Urethane coatings having a lower solids content or any other suitable type of coating, like paint, may also be used. The only problem with using a coating with a lower solids content is that it may take longer to dry and possibly need a primer." See '634 patent, col. 6, lines 63-67. Thus, the explicit disclosure of Aufderhaar suggests that the disclosed panel is a conventional skin in that it requires a primer (and thus lacks a pigmented sealer as claimed by Appellant). See Specification, p. 17, lines 9-16 (noted above with respect to claim 30).

Claim 32

Claim 32 depends from claim 18 and therefore includes all of the features of claim 18. In addition, the invention of claim 32 provides for a foam filling the hollow

core area between the first and second skins. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

The Examiner acknowledges that Lynch does not suggest or disclose a door skin having the bond strength claimed by Appellant. The Examiner also acknowledges that Lynch fails to disclose or suggest a foam as provided in claim 32, but nevertheless asserts that the invention of claim 32 would have been obvious to one skilled in the art. Such an unsubstantiated rejection should not be sustained. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness". *In re Kahn,* 441 F.3d at 988, 78 USPQ2d at 1336.

Claim 33

Claim 33 is directed to a hollow core door having a door frame, and first and second door skins attached to opposite first and second sides of the door frame, respectively. The first door skin comprises a first reformed molded wood composite having a plurality of panels and a bond strength of at least about 2.0 N/mm^2. The second door skin comprises a second reformed molded wood composite having a plurality of panels and a bond strength of at least about 2.0 N/mm^2.

Thus, the invention of claim 33 is similar to the invention of claim 18 in that both inventions include a reformed molded wood composite door skin having a plurality of molded panels, and a bond strength of at least about 2.0 N/mm^2.

The Examiner relies on Lynch in combination with the criticality argument in rejecting claim 33. Accordingly, Appellant reasserts all of the arguments set forth above,

which will not be repeated hereafter, and submits that a *prima facie* case of obviousness has not been made.

Claim 34

Claim 34 depends from claim 33 and therefore includes all of the features of claim 33. In addition, the invention of claim 34 provides that the first and second reformed molded wood composites each have a density of from about 550 kg/m^3 to about 1200 kg/m^3. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter.

The Examiner acknowledges that Lynch does not teach the claimed density limitation. Instead, the Examiner again relies on a criticality argument, asserting that "Applicant fails to show criticality for specifically claimed skin density; therefore it would have been an obvious design choice to use the skin density" specified in the claim. However, the claimed skin density is specifically discussed in the specification. See Specification, p. 14, lines 1-2; and p. 22, line 24 – p. 23, line 2 (noted above). The "reformed skins 7 and 9 attain a significantly higher hardness than is currently available with other molded skins." See Specification, p. 14, lines 15-17.

The Examiner's criticality argument fails to properly take into account the totality of the record, including the explicit specification disclosure. Accordingly, a *prima facie* case of obviousness has not been made.

Claim 35

Claim 35 depends from claim 33 and therefore includes all of the features of claim 33. In addition, the invention of claim 35 provides that the first and second reformed molded wood composites each have a density of from about 800 kg/m^3 to about

1200 kg/m^3. Thus, Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter, and in particular those set forth with respect to claim 34 above.

Claim 36

Claim 36 depends from claim 35 and therefore includes all of the features of claims 33 and 35. In addition, the invention of claim 36 provides that both the first and second reformed molded wood composites each have a bond strength of at least 2.5 N/mm^2. Thus, Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter. In particular, Appellant refers to those arguments set forth with respect to claims 35 and 19 above.

Claim 37

Claim 37 depends from claim 33 and therefore includes all of the features of claim 33. In addition, the invention of claim 37 provides for first and second sealers on the exterior surfaces of the first and second door skins, respectively. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter. However, Appellant refers particularly to those arguments set forth with respect to claim 30.

Claim 38

Claim 38 depends from claim 33 and therefore includes all of the features of claim 33. In addition, the invention of claim 38 includes first and second moisture impervious barriers on the exterior surfaces of the first and second door skins, respectively. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter. However, Appellant refers particularly to those arguments set forth with respect to claim 23.

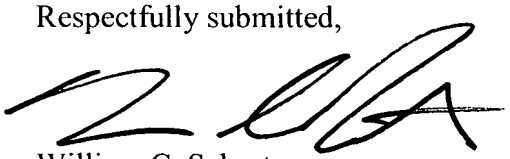
Claim 39

Claim 39 depends from claim 33 and therefore includes all of the features of claim 33. In addition, the invention of claim 39 includes a foam filling the hollow core area between the first and second skins. Appellant reasserts all of the arguments set forth above, which will not be repeated hereafter. However, Appellant refers particularly to those arguments set forth with respect to claim 32.

CONCLUSION:

For the reasons set forth herein, Appellant respectfully requests that the Board reverse the Examiner's Final Rejection. Allowance of all pending claims is earnestly solicited.

Respectfully submitted,



William C. Schrot
Registration No. 48,447
Attorney for Appellant

Berenato, White & Stavish, LLC
6550 Rock Spring Drive, Suite 240
Bethesda, Maryland 20817
Telephone: (301) 896-0600
Facsimile: (301) 896-0607

CLAIMS APPENDIX:

The claims involved in this appeal are provided:

18. A hollow core door comprising:

a door frame; and

first and second door skins attached to said door frame so as to define a hollow core area there between, at least one of said skins being a reformed molded wood composite door skin having molded therein a plurality of panels,

wherein said at least one molded door skin has a bond strength of at least about 2.0 N/mm^2.

19. The door of claim 18, wherein each of the first and second door skins is a molded door skin having a bond strength of at least about 2.5 N/mm^2.

20. The door of claim 18, wherein each of said first and second door skins is a molded door skin formed by pressing a loose bat or mat into a wood composite flat door blank having a density of at least about 550 kg/m^3, and thereafter moisturizing, heating, and reforming in a press said flat door blank into a molded door skin having the panels molded therein, so that the bond strength of each of the skins is increased relative to that of the original flat blanks from which they are formed.

23. The door of claim 18, wherein said one molded door skin has an exteriorly disposed side having a moisture impervious barrier thereon.

24. The door of claim 23, wherein said moisture impervious barrier is selected from the group consisting of melamine impregnated crepe paper, phenolic resin crepe paper, and cross-linked polymeric resin.

25. The door of claim 18, wherein said one molded door skin has a substantially constant density.

26. The door of claim 18, wherein said one molded door skin has an outer planar portion, an inner planar portion, and a contoured portion between and integral with said outer and inner planar portions.

27. The door of claim 26, wherein said outer planar portion lies on a plane that is coplanar with the plane of said inner planar portion.

28. The door of claim 26, wherein said contoured portion includes an angled offset portion.

29. The door of claim 26, wherein said contoured portion has a thickness differing from the thickness of said outer and inner planar portions.

30. The door of claim 18, wherein said one molded door skin has an exteriorly disposed side having a pigmented sealer thereon.

31. The door of claim 30, wherein said pigmented sealer provides a uniform colored surface.

32. The door of claim 18, further comprising a foam filling the hollow core area.

33. A hollow core door comprising:

a door frame having opposite first and second sides;

a first door skin attached to said first side of said door frame, said first door skin comprising a first reformed molded wood composite having a plurality of panels and a bond strength of at least about 2.0 N/mm^2; and

a second door skin attached to said second side of said door frame to establish a hollow core area between said first and second door skins, said second door skin comprising a second reformed molded wood composite having a plurality of panels and a bond strength of at least about 2.0 N/mm^2.

34. The door of claim 33, wherein the first and second reformed molded wood composites each have a density of from about 550 kg/m^3 to about 1200 kg/m^3.

35. The door of claim 33, wherein the first and second reformed molded wood composites each have a density of from about 800 kg/m^3 to about 1200 kg/m^3.

36. The door of claim 35, wherein said first and second reformed molded wood composites each have a bond strength of at least 2.5 N/mm^2.

37. The door of claim 33, further comprising first and second sealers applied to exterior surfaces of said first and second door skins, respectively.

38. The door of claim 33, further comprising first and second moisture impervious barriers applied to exterior surfaces of said first and second door skins, respectively.

39. The door of claim 33, further comprising a foam filling the hollow core area.

EVIDENCE APPENDIX:

None

RELATED PROCEEDINGS APPENDIX:

None